

REMARKS/ARGUMENTS

In the Office Action mailed on February 3, 2009, claims 1-9 are rejected. Additionally, claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In response, claim 10 has been amended to correct an informality. Additionally, new claims 11-16 have been added. Applicant hereby requests reconsideration of the application in view of the claim amendments and the below-provided remarks.

Allowable Subject Matter

Applicant appreciates the Examiner's review of and determinations that claim 10 recites allowable subject matter. In particular, the Office Action states that claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

At this time, Applicant chooses not to rewrite claim 10 in independent form including all of the limitations of the base claim and any intervening claims. Instead, Applicant respectfully asserts that the pending claims are allowable based on the remarks below.

For reference, claim 10 has been amended to correct an informality. In particular, claim 10 has been amended to replace the phrase "between 3 bits to 5 bits" with the phrase "between 3 bits and 5 bits."

Claim Rejections under 35 U.S.C. 103

Claims 1, 3-5, and 7-9 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Östman (U.S. Pat. No. 6,061,385) in view of Applicant's Admitted Prior Art (hereinafter "AAPA"). Claim 9 is also rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Östman in view of the AAPA and further in view of Mostafa et al. (U.S. Pat. No. 7,110,732 B2, hereinafter "Mostafa"). Additionally, claims 1, 3-5, and 7-9 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Mathe (U.S. Pat. No. 6,243,430 B1) in view of the AAPA. Claim 9 is also rejected under

35 U.S.C. 103(a) as allegedly being unpatentable over Mathe in view of the AAPA and further in view of Mostafa. Applicant respectfully submits that the pending claims are patentable over the cited references for the reasons provided below.

Independent Claim 1

Claim 1 recites in part a digital filter that filters digital signals to “*allow relaxation of tolerable quantization noise generated by the ADC to a pre-defined level to thereby substantially reduce a dynamic range of the ADC, wherein the pre-defined level is higher than a level prescribed by the receiver's sensitivity.*” In other words, claim 1 recites that the dynamic range of an ADC is reduced as a result of the relaxation of tolerable quantization noise generated by the ADC. Claim 1 also recites that the relaxation of tolerable quantization noise generated by the ADC is to a level that is higher than a level prescribed by the receiver's sensitivity.

Applicant respectfully asserts that Östman, Mathe, and the AAPA fail to teach that “*the pre-defined level is higher than a level prescribed by the receiver's sensitivity*” (emphasis added), as recited in claim 1.

The Office Action states that Östman and Mathe both fail to teach that “*the pre-defined level is higher than a level prescribed by the receiver's sensitivity*” (emphasis added), as recited in claim 1. (See page 3 and page 7 of the Office Action). The Office Action cites the AAPA, in particular, Fig. 1 and page 2, lines 12-20 of Applicant's specification, as teaching that “*the pre-defined level is higher than a level prescribed by the receiver's sensitivity*” (emphasis added), as recited in claim 1. Applicant respectfully asserts that the AAPA fails to teach the above-identified limitation of claim 1.

With reference to Fig. 1, the AAPA teaches that the quantization noise of an n-bit analog-to-digital converter (ADC) (52) is specified by the sensitivity of a conventional RF receiver (10). (See also page 2, lines 12-15 of Applicant's specification). The AAPA further teaches that the lower limit of the dynamic range of the ADC (52) is specified by the equivalent quantization noise level as prescribed by the sensitivity of the conventional RF receiver (10) and the required signal to-interference ratio (SIR). (See Fig. 1 and page 2, lines 16-20 of Applicant's specification). That is, the AAPA teaches that the dynamic range of the ADC (52) cannot be lower than a level prescribed by the sensitivity of the

conventional RF receiver (10). The dynamic range of the ADC (52) will be reduced when the quantization noise generated by the ADC (52) increases. Thus, if the quantization noise generated by the ADC (52) is higher than the sensitivity of the conventional RF receiver (10), the dynamic range of the ADC (52) will be lower than a level prescribed by the sensitivity of the conventional RF receiver (10). However, as described above, the AAPA teaches that the dynamic range of the ADC (52) cannot be lower than a level prescribed by the sensitivity of the conventional RF receiver (10). As a result, the quantization noise generated by the ADC (52) cannot be higher than the sensitivity of the conventional RF receiver (10). Because the quantization noise generated by the ADC (52) cannot be higher than the sensitivity of the conventional RF receiver (10), Applicant respectfully asserts that the AAPA fails to teach that “*the pre-defined level is higher than a level prescribed by the receiver's sensitivity*” (emphasis added), as recited in claim 1.

Because Östman, Mathe, and the AAPA fail to teach the above-identified limitation of claim 1, Östman, Mathe, and the AAPA fail to teach all of the limitations of claim 1. Thus, Applicant respectfully asserts that a *prima facie* case of obviousness has not been established with respect to claim 1.

Dependent Claims 3-4

Claims 3-4 depend from and incorporate all of the limitations of the independent claim 1. Thus, Applicant respectfully asserts that claims 3-4 are allowable at least based on an allowable claim 1.

Independent Claim 5

Claim 5 includes similar limitations to claim 1. Because of the similarities between claim 1 and 5, Applicant respectfully asserts that the above remarks with regard to claim 1 apply also to claim 5. Accordingly, Applicant respectfully asserts that claim 5 is patentable over Östman, Mathe, and the AAPA.

Dependent Claims 7-8

Claims 7-8 depend from and incorporate all of the limitations of the independent claim 5. Thus, Applicant respectfully asserts that claims 7-8 are allowable at least based on an allowable claim 5.

Dependent Claims 9-10

Claims 9-10 depend from and incorporate all of the limitations of the independent claim 1. Thus, Applicant respectfully asserts that claims 9-10 are allowable at least based on an allowable claim 1.

New Claims 11-16

Claims 11-16 have been added. Support for claims 11-16 can be found in Applicant's specification at, for example, original claims 1 and 5, page 3, lines 18-19, page 6, lines 23-24, and page 7, lines 1-8.

Claims 11-13 depend from and incorporate all of the limitations of the independent claim 1. Thus, Applicant respectfully asserts that claims 11-13 are allowable at least based on an allowable claim 1. Claims 14-16 depend from and incorporate all of the limitations of the independent claim 5. Thus, Applicant respectfully asserts that claims 14-16 are allowable at least based on an allowable claim 5. As described above, Applicant appreciates the Examiner's review of and determinations that claim 10 recites allowable subject matter. Each of the new claims 11-16 includes similar limitations to claim 10. Because of the similarities between claim 10 and claims 11-16, Applicant respectfully asserts that each of the new claims 11-16 recites allowable subject matter.

CONCLUSION

Applicant respectfully requests reconsideration of the claims in view of the amendments and remarks made herein. A notice of allowance is earnestly solicited.

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-4019** pursuant to 37 C.F.R. 1.25. Additionally, please charge any fees to Deposit Account **50-4019** under 37 C.F.R. 1.16, 1.17, 1.19, 1.20 and 1.21.

Respectfully submitted,

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